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CSE 442

Assignment #1

My data visualization aims to answer the question “How does the gender composition of admitted students vary across departments?” To answer this question, I visualized the percentage of admitted students and based on department and by gender.

The bubble pack visualization helps illustrate the size of each of the departments relative to others without the use of a scale. The axes were eliminated as the exact size of the department is not needed. This gives the reader one fewer element to consider. Another benefit to bubble pack is the closeness of the elements, making it easy for the reader to examine all six departments at once. There is a randomness to the way the departments are arranged, reflecting the lack of ordinal relationship that exists among these departments. If there had been a made-up ranking used here, it could cause confusion to the reader. One downside to the bubble pack visualization is that it assumes each of the admitted students were admitted into exactly one department; it’s possible that this visualization double counts.

The individual pie charts that make up the bubble pack help illustrate the proportion of women to men in each department. The classic colors, blue and pink, are used as these two colors are widely accepted associations of each respective gender. The pie chart is a visual communication of the gender proportions, eliminating the need for numbers. Numbers were also not included in effort to minimalize the number of elements on the screen. (If this were an interactive visualization, the user would be able to click on each section of each pie chart and view the exact percentages.) The only exception to this would be the actual titles of each of the departments, written in uniform font and placed at the center of each of the pie charts. The graph on the right side is used as a reference to remind the user of what the gender make-up is among public universities in the United States today. Colors, captions and legends are included.

The conclusion of my visualization is that in total, there were more men admitted into the six departments than there were women. However, in four of the six represented departments, about half or more of the students were females. This finding would not be highlighted in a bar chart that only calculated the number of females and males nor a bar chart that calculated the percentage of females to males. The combined bubble pack visualization and individual pie charts captures both the relative size of each department as well as each departments’ gender composition. Through both these visualization techniques, it becomes obvious that there were more men admitted to these six departments. The graph on the right comes into play when discussing the results because it becomes apparent that this university is admitting more men than women in comparison to other public universities. Other notable insights include a high percentage of men admitted to physics and astronomy and a high percentage of women admitted to psychology and sociology.